Multichannel Image Identification And Restoration Using Continuousspatial Domain Modeling

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Summary

In this paper, a novel identification technique for multichannel image processing is presented. Using the maximum likelihood estimation (ML) approach, the image is represented as an autoregressive (AR) model and blur is described as a continuous spatial domain model. Such a formulation overcomes some major limitations encountered in other ML methods. Moreover, cross-spectral and spatial components are incorporated in the multichannel modeling. It is shown that by incorporating those components, the overall performance is improved significantly. Also, experimental results show that blur extent can be optimally identified from noisy color images that are degraded by uniform linear motion or out-of-focus blurs